

Application No. 09/712042
Page 2

Amendment
Attorney Docket No. S63.2N-6430-US03

Amendments To The Claims:

19. (Currently Amended) A balloon for a medical device formed from a length of tubing of a polymer material by radial expansion of the tubing under pressure, the polymer material comprising a melt blend product of at least two thermoplastic polymers, a first of said polymers being an engineering resin having a flexural modulus of about 240,000 psi or greater and a second of said polymers being a block copolymer elastomer having a flexural modulus of about 150,000 psi or less, the block copolymer including at least one block which is structurally similar to the engineering resin, wherein the first and second polymers are a pair selected from the group consisting of engineering polyurethane resins and polyurethane elastomers; aromatic polyesters or copolyesters and aromatic polyester-polyether block copolymers; aromatic polyesters and polyurethane-polyester block copolymers; and polycarbonates and polycarbonate urethane elastomers.

20. (Previously presented) A balloon as in claim 19 wherein the first and second polymers are engineering polyurethane resins and polyurethane elastomers, respectively.

21. (Withdrawn) A balloon as in claim 19 wherein the first and second polymers are aromatic polyesters or copolyesters and aromatic polyester-polyether block copolymers, respectively.

22. (Withdrawn) A balloon as in claim 19 wherein the first and second polymers are aromatic polyesters and polyurethane-polyester block copolymers, respectively.

23. (Withdrawn) A balloon as in claim 19 wherein the first and second polymers are polycarbonates and polycarbonate urethane elastomers, respectively.

24. (Withdrawn) A balloon as in claim 21 wherein the second polymer is characterized as follows:

the block copolymer comprises two or more hard segments of a polyester and two or more soft segments of polyether;

the polyester hard segments are polyesters of an aromatic dicarboxylic acid and a C2-C4 diol, and

Application No. 09/712042
Page 3

Amendment
Attorney Docket No. S63.2N-6430-US03

the polyether soft segments are polyethers of C2-C10 diols,
the block copolymer has a hardness, Shore D scale, of greater than 60; and
the percentage by weight of the block polymer attributable to the hard segments is
between about 50% and about 95%.

25. (Withdrawn) A balloon as in claim 24 wherein the block copolymer has a Shore D hardness in the range of 65-75 and a flexural modulus in the range of 50,000-120,000 psi.

26. (Withdrawn) A balloon as in claim 24 wherein said polyether segment, is selected from the group consisting of poly(tetramethylene ether), poly(pentamethylene ether) and poly(hexamethylene ether).

27. (Withdrawn) A balloon as in claim 24 wherein said polyester segments are polyesters of an acid selected from the group consisting of ortho-, meta- or para- phthalic acid, naphthalenedicarboxylic acid and meta-terphenyl-4,4'-dicarboxylic acids and a diol selected from the group consisting of ethylene glycol, 1,3-propane diol and 1,4-butane diol.

28. (Withdrawn) A balloon as in claim 21 wherein
the first polymer is selected from the group consisting of polyethylene terephthalate, polyethylene naphthanate, polyethylene terephthalate-polyethylene isophthalate copolymer, polybutylene terephthalate and polybutylene naphthanate, and,
the second polymer is poly(butylene terephthalate-*block*-poly(tetramethylene oxide)).

29. (Withdrawn) A balloon as in claim 22 wherein
the first polymer is selected from the group consisting of polyethylene terephthalate, polyethylene naphthanate, polyethylene terephthalate-polyethylene isophthalate copolymer, polybutylene terephthalate and polybutylene naphthanate, and,
the second polymer is aliphatic polyester polyurethane.

30. (Previously presented) A balloon as in claim 19 having a wall strength greater than 20,000 psi.

31. (Previously presented) A balloon as in claim 19 having a semi-compliant to non-compliant distension profile whereby as inflation pressure is increased from 6 atm to 12 atm, the

Application No. 09/712042
Page 4

Amendment
Attorney Docket No. S63.2N-6430-US03

balloon expands from a nominal diameter at the 6 atm pressure to an increased diameter at the 12 atm pressure which is from about 5% to about 16% greater than said nominal diameter.

32. (Previously presented) A balloon as in claim 19 having a nominal diameter of between 1.5 mm and 4.0 mm, the balloon having a burst pressure of at least 12 atm.

33. (Previously presented) A dilation catheter having an elongated tubular body, a balloon mounted on a distal end thereof and means for inflation of the balloon, wherein the balloon is a balloon as in claim 19.

34. (Previously presented) A balloon as in claim 20, wherein the first polymer is an aromatic polyurethane-polyether.

35. (Previously presented) A balloon as in claim 34, the first polymer having a flexural modulus of about 300,000.

36. (Previously presented) A balloon as in claim 20, wherein said second polymer is selected from the group consisting of Aliphatic polyurethane-polyether block copolymers, aromatic polyurethane-polyether polymers, elastomeric polyurethane--polyethers and elastomeric polyurethane-polyesters.

37. (Previously presented) A balloon as in claim 34, wherein said second polymer is selected from the group consisting of Aliphatic polyurethane-polyether block copolymers, aromatic polyurethane-polyether polymers, elastomeric polyurethane--polyethers and elastomeric polyurethane-polyesters.

38. (Previously presented) A balloon as in claim 20 having a wall strength greater than 20,000 psi.

39. (Previously presented) A balloon as in claim 20 having a semi-compliant to non-compliant distension profile whereby as inflation pressure is increased from 6 atm to 12 atm, the balloon expands from a nominal diameter at the 6 atm pressure to an increased diameter at the 12 atm pressure which is from about 5% to about 16% greater than said nominal diameter.

40. (Previously presented) A balloon as in claim 20 having a nominal diameter of between 1.5 mm and 4.0 mm, the balloon having a burst pressure of at least 12 atm.

41. (Previously presented) A dilation catheter having an elongated tubular body, a balloon

Application No. 09/712042
Page 5

Amendment
Attorney Docket No. S63.2N-6430-US03

mounted on a distal end thereof and means for inflation of the balloon, wherein the balloon is a balloon as in claim 20.

42. (Previously presented) A balloon as in claim 20, having a semi-compliant to non-compliant distension profile, whereby, as inflation pressure is increased from 6 atm to 12 atm, the balloon expands from a nominal diameter at the 6 atm pressure to an increased diameter at the 12 atm pressure, which is about 16% greater than said nominal diameter.

43. (Previously presented) A balloon as in claim 20, the balloon having a burst pressure of about 16 atm.

44. (Previously presented) A balloon as in claim 42, the balloon having a burst pressure of about 16 atm.

45. (Previously presented) A balloon as in claim 19, wherein the first and second polymers are a pair selected from the group consisting of aromatic polyesters or copolyesters and aromatic polyester-polyether block copolymers; aromatic polyesters and polyurethane-polyester block copolymers; and polycarbonates and polycarbonate urethanes elastomers.